

NOTES FROM 04.20.05 PROTON DRIVER MEETING - CIVIL

Attendees: Rich Stanek, Al Moretti, Rich Andrews, Chris Jensen, Bob Ducar, Bob Webber, Dixon Bogert, Rod Walton, Lee Hammond, Gary VanZandbergen, Chuck Federowicz, Elaine McCluskey

ITEMS DISCUSSED:

Meeting focused on continuing to lay out a typical RF Station (1300MHz klystron). Al and Chris brought drawings and information on klystrons and transformers. Here are the conclusions from the meeting, including new information in specific areas:

1. Klystron:

a. Horizontal arrangement:

- i. length on horizontal is 3.25m wo/shielding, 3.75m w/ shielding. Need to withdraw probably from long direction out of shielding, so overall length for situating in gallery is $3.25 + 3.75 = 7\text{m}$
- ii. Shielding is 1.75m square of lead plates
- iii. Even with horizontal alignment, waveguide penetration would still be in high location on wall.
- iv. Agreed need to see how horizontal alignment works in the gallery layout with other equipment – Elaine will bring to next meeting

b. Vertical arrangement:

- i. Not clear how high roof needs to be in order to be able to remove – involved with how removal would be done, whether by hoist from bottom of a beam or from equipment on the floor. Would be good to have incremental cost of raising the roof by each foot – Elaine will work on this
- ii. Thinking out of the proverbial box, talked about lowering transformer so that roof could be shorter - put into a pit perhaps a couple feet down. This could also be oil containment. Allow for 3' approximately all around for making connections

2. Pulse Transformer:

- a. Ultimate configuration transformers that would be added later are smaller –Chris brought info showing size = 98" x 48" x 53" tall
- b. Shipping wt = 8000#
- c. Klystron socket same size as initial transformer @ 35" x 48" x 35" tall

3. Modulator:

- a. Will need a disconnect at the modulator where the power comes in to facilitate installation and maintenance

4. DC Power Supply:

- a. Has oil requiring containment – Chris said contains 250 gallons

5. Racks:

- a. Can move closer to the wall.
- b. Racks would be 7 ft high, with 2 ft clear required from the top of the rack to nearest obstruction.

6. HVAC in gallery:

- a. Planning for fan coils in ceiling every 60 ft vs fewer units with ductwork in gallery
- b. Could install 12 initially, and add 24 when upgrade is done – very modular
- c. This would be more localized control, but requires more maintenance than just a few hvac units
- d. Ductwork would likely take up same space in building cross-section as a fan coil unit cross-section would
- e. Still need heat loads from equipment

ITEMS FOR NEXT MEETING:

- Continue on 1300MHz RF station layout. Elaine to bring views of horizontal arrangement. Reinvite: Dan Wolff, Brian Chase, Bob Webber, Elliott McCrory, Maurice Ball, Bob Slazyk, Ken Quinn, Chris Jensen, Bob Ducar
- Start on layout for 325 MHz RF station layout. Elaine will bring Mike May version of layout from some weeks ago. Same group to invite.

NEXT MEETING 4/27/05 AT 9:30 A.M. IN THE conFESSional WH5NE